

The claims remaining in the application are 1-3, 6-7, 10-13, 16-17 and 20.

REMARKS

The Applicants would like to thank the Examiner for the quick and courteous Office Action.

Priority

The Examiner found that the Applicants had not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. §119(e) as follows:

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR §1.78(a)(2) and (a)(5)).

The Applicants appreciate the Examiner pointing out this oversight and would respectfully direct the Examiner's attention to the amendment to page 1 herein where the new section "Cross-Reference to Related Application" has been added reciting "This application claims the benefit of U.S. provisional application no. 60/285,506 filed April 19, 2001." It is respectfully submitted that the Rules and the Law have now been complied with so that the subject application may receive the benefit of the earlier filed provisional application. It is respectfully submitted that this change is made to correct an inadvertent clerical error and not for any reason substantially related to patentability. Reconsideration is respectfully requested.

Specification

The Examiner has objected to the disclosure because of the following informalities: Applicants should clarify the structures (V) and (VI) (page 4) regarding the group -C(=O)-RO . To the extent said group is to represent an ester group, the Examiner notes it should be denoted -C(=O)-OR .

The Applicants appreciate the Examiner pointing out these inadvertent errors. The Examiner's attention is respectfully directed to the changes to the specification made

herein, specifically the portion of paragraph [0014] that appears on page 4 where the ester groups inadvertently incorrectly denoted $-C(=O)-RO$ have been changed to be represented more correctly as: $-C(=O)-OR$ in structures (V) and (VI). Further, the carboxylic acid groups inadvertently incorrectly denoted $-C(=O)-HO$ have been changed to be represented more correctly as: $-C(=O)-OH$. It is respectfully submitted that these changes are made to correct inadvertent clerical errors and not for any reason substantially related to patentability. Reconsideration is respectfully requested.

Claim Objections

The Examiner has objected to claims 1-20 because of the following informalities: Applicants should clarify the structures (V) and (VI) (claims 3, 7, 13 and 17) regarding the group $-C(=O)-RO$. To the extent said group is to represent an ester group, the Examiner notes it should be denoted $-C(=O)-OR$. The remaining claims are included herein to the extent they wholly incorporate said limitations. Appropriate correction is required.

The Applicants appreciate the Examiner pointing out these inadvertent errors. The Examiner's attention is respectfully directed to the changes to claims 3, 7, 13 and 17 where the ester groups inadvertently incorrectly denoted $-C(=O)-RO$ have been changed to be represented more correctly as: $-C(=O)-OR$ in structures (V) and (VI). Further, the carboxylic acid groups inadvertently incorrectly denoted $-C(=O)-HO$ have been changed to be represented more correctly as: $-C(=O)-OH$. It is respectfully submitted that these changes are made to correct inadvertent clerical errors and not for any reason substantially related to patentability. Reconsideration is respectfully requested.

Rejection under 35 U.S.C. §112, Second Paragraph

The Examiner has rejected claims 19 and 20 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claims 19 and 20 reference the method of claim 17 but independent claim 17 is directed to a composition rather than a method and lacks a method step. It is unclear what metes and bounds of the claimed subject matter Applicants intend.

The Applicants would respectfully direct the Examiner's attention to the fact that claim 19 has been deleted herein. The Applicants would additionally respectfully direct the Examiner's attention to the amendment to claim 20 where the word "method" has been replaced by the term "reduced drag fluid" to correct this inadvertent error. It is respectfully submitted that this change is made to correct an inadvertent clerical error and not for any reason substantially related to patentability. Reconsideration is respectfully requested.

Claim Interpretation

The Examiner finds that Applicants' claims are directed to a method of reducing drag of a fluid by employing the active steps of "providing a fluid" and "adding ... an additive effective to reduce drag". Said fluid is further defined in claims 2, 7-10, 12 and 17-20 as selected from the group consisting of hydrocarbons, mixtures of hydrocarbons and water, and mixtures of hydrocarbons, water and gas. Claims 5 and 9 further define the claimed effective amount as about 100 to 1000 ppm. The specification (paragraph [0022]) specifies said range as well as alternative ranges of about 150 to about 600 ppm and about 200 to about 500 ppm.

Claims 6, 10, 16 and 20 additionally set forth, "the additive contains more than one maleated fatty acid, ester and salt thereof". This is interpreted as a mixture of two or more different compounds differing in molecular structure, e.g., isomers, acid, ester, salt. Natural fatty acid sources such as tall oil include mixtures and maleated fatty acids resulting therefrom would also be expected to produce mixtures of more than one maleated fatty acid, ester and salt therefrom.

The Applicants do not disagree with these interpretations.

Rejection under 35 U.S.C. §102(b) Over Kindscher, et al.

The Examiner has rejected all of the claims in the application 1-20 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Pat. No. 3,985,504 to Kindscher, et al. The Examiner contends that Kindscher, et al. discloses adding maleated tall oil fatty acids neutralized with triethanolamine (tertiary amine) and is added to a fluid in an

amount of 0.5 to 5% by weight (equates to 500 to 5000 ppm) of said fluid. The drag reducing function and amount of the additive effective to reduce drag would allegedly have been inherent to the methods and compositions of Kindscher, et al. since the methods and compositions read on and are otherwise anticipate the additive, method steps and concentrations for use as a corrosion inhibitor.

The Applicants must respectfully traverse. A patent claim is anticipated, and therefore invalid, only when a single prior art reference discloses each and every limitation of the claim. *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047, 34 U.S.P.Q.2d 1565 (Fed. Cir.), cert. denied, 116 S.Ct. 516 (1995).

The Examiner is correct that Kindscher, et al. discloses adding their ene-adducts to a liquid medium to be treated in an amount of 0.5 to 5% by weight. However, it is respectfully submitted that the Examiner incorrectly determined that this proportion ranges equates to 500 to 5000 ppm of said fluid. Instead, 0.5 to 5 wt% correctly equates to 5,000 to 50,000 ppm. The calculation for 5,000 ppm is presented as an example:

$$\frac{5000 \text{ parts}}{1,000,000 \text{ parts}} \times 100 = 0.5 \text{ wt\%}$$

The Examiner's attention is further respectfully directed to the fact that claims 1, 7, 11, and 17 have been amended herein to further recite the amount of additive proportion of original dependent claims 5, 9, 15, and 19, of from 100 to 1000 ppm. Support for these further recitations is found in these dependent claims as originally filed, and thus do not constitute improper insertions of new matter. This range of 100 to 1000 ppm is considerably lower and below that of 5000 to 50,000 ppm (0.5 to 5 wt%) taught by Kindscher, et al. It thus takes much less of Applicants' claimed additive to effect drag reduction as compared with the amount of Kindscher, et al.'s ene-adducts required to inhibit corrosion. Because the single prior art reference does not disclose each and every limitation of the claims, as amended, it is respectfully submitted that the amended claims are not anticipated by Kindscher, et al.

Reconsideration is respectfully requested.

Rejection under 35 U.S.C. §102(b) Over Dougherty, et al.

The Examiner has rejected all of the claims 1-20 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Pat. No. 5,582,792 to Dougherty, et al. The Examiner contends that Dougherty, et al. discloses adding maleated fatty acids neutralized with diethoxylated alkyl amine (tertiary amine) and is added to a fluid in an amount of 25 to 1000 ppm of said fluid. The Examiner alleges that the drag reducing function and an amount of the additive effective to reduce drag would have been inherent to the methods and compositions of Dougherty, et al. since the methods and compositions read on and allegedly otherwise anticipate the additive, method steps and concentrations for use as a corrosion inhibitor.

The Applicant must respectfully traverse.

Again, a patent claim is anticipated, and therefore invalid, only when a single prior art reference discloses each and every limitation of the claim. *Glaxo Inc. v. Novopharm Ltd., id.*

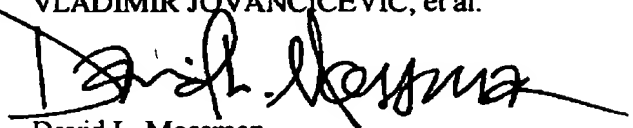
With respect to the amine salts originally claimed, the amine salts were recited as selected from the group consisting of imidazoline salts of; primary, secondary and tertiary amine salts of; alkoxylated amine salts of; heterocyclic amine salt forms of the maleated fatty acids and maleated fatty acid esters and mixtures of. The Examiner's attention is respectfully directed to original dependent claims 4, 8, 14 and 18 (now cancelled), and page 5, lines 21-25 in paragraph [0019].

The Examiner's attention is further respectfully directed to the amendments to independent claims 1, 7, 11 and 17 herein where this same list of amine salts is recited *except for* the alkoxylated amine salts. The diethoxylated alkyl amines of Dougherty, et al. are alkoxylated amine salts of this definition, and are excluded from the claims herein by the amendments to the independent claims 1, 7, 11 and 17. Thus, because a single prior art reference does not disclose each and every limitation of the claims, it is respectfully submitted that the claims as amended are not anticipated by Dougherty, et al. Support for these changes is found in the application as filed at original dependent claims 4, 8, 14 and 18, and page 5, lines 21-25 in paragraph [0019] and thus do not constitute improper insertions of new matter.

It is respectfully submitted that because each and every limitation of the claim is not taught by the single prior art reference, the amended claims are not anticipated thereby. Reconsideration is respectfully requested.

It is respectfully submitted that the amendments and arguments presented above overcome all of the rejections. Reconsideration and allowance of the claims are respectfully requested. The Examiner is respectfully reminded of his duty to indicate allowable subject matter. The Examiner is invited to call the Applicants' attorney at the number below for any reason, especially any reason that may help advance the prosecution.

Respectfully submitted,
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